```
=> file medline biosis caplus

COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.15       0.15

FILE 'MEDLINE' ENTERED AT 10:30:21 ON 22 DEC 2000

FILE 'BIOSIS' ENTERED AT 10:30:21 ON 22 DEC 2000
COPYRIGHT (C) 2000 BIOSIS(R)

FILE 'CAPLUS' ENTERED AT 10:30:21 ON 22 DEC 2000
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2000 AMERICAN CHEMICAL SOCIETY (ACS)

=> s micron

L1       21709 MICRON

=> s l1 (p) (array# or chip#)

L2         533 L1 (P) (ARRAY# OR CHIP#)

=> s l2 (p) (DNA or nucleic or oligo?)

L3          27 L2 (P) (DNA OR NUCLEIC OR OLIGO?)

=> dup rem l3

PROCESSING COMPLETED FOR L3
L4           22 DUP REM L3 (5 DUPLICATES REMOVED)

=> d 1-22 ti


L4   ANSWER 1 OF 22  MEDLINE
TI   Focal extraction of surface-bound DNA from a microchip using
photo-thermal
     denaturation.

L4   ANSWER 2 OF 22  BIOSIS  COPYRIGHT 2000 BIOSIS      DUPLICATE 1
TI   The BARC biosensor applied to the detection of biological warfare
agents.

L4   ANSWER 3 OF 22  CAPLUS  COPYRIGHT 2000 ACS
TI   Arrays produced by DNA nanotechnology.

L4   ANSWER 4 OF 22  CAPLUS  COPYRIGHT 2000 ACS
TI   Randomly ordered, high-density, fiber-optic, microsensor-array sensors.

L4   ANSWER 5 OF 22  MEDLINE                              DUPLICATE 2
TI   Active microeletronic chip devices which utilize controlled
     electrophoretic fields for multiplex DNA hybridization and other genomic
     applications.

L4   ANSWER 6 OF 22  CAPLUS  COPYRIGHT 2000 ACS
TI   DNA nanostructure arrays.
```

L4 ANSWER 7 OF 22 CAPLUS COPYRIGHT 2000 ACS
TI Simplified fabricati[redacted]f integrated CE on chips.

L4 ANSWER 8 OF 22 MEDLINE DUPLICATE 3
TI Discrimination of DNA hybridization using chemical force microscopy.

L4 ANSWER 9 OF 22 CAPLUS COPYRIGHT 2000 ACS
TI Elements for molecular information processing. Rotaxanes

L4 ANSWER 10 OF 22 CAPLUS COPYRIGHT 2000 ACS
TI Micromachined molds for microfluidic chips

L4 ANSWER 11 OF 22 CAPLUS COPYRIGHT 2000 ACS
TI Apparatus for the chemical synthesis of molecular arrays

L4 ANSWER 12 OF 22 CAPLUS COPYRIGHT 2000 ACS
TI Jet droplet device and method

L4 ANSWER 13 OF 22 MEDLINE
TI Analysis of biological particles using dielectrophoresis and impedance measurement.

L4 ANSWER 14 OF 22 CAPLUS COPYRIGHT 2000 ACS
TI Separation of DNA using ferrofluid array electrophoresis

L4 ANSWER 15 OF 22 CAPLUS COPYRIGHT 2000 ACS
TI Microclustering patterns of acetylcholine receptors on myotubes studied by spatial fluorescence autocorrelation

L4 ANSWER 16 OF 22 MEDLINE
TI A method for DNA sequencing by hybridization with oligonucleotide matrix.

L4 ANSWER 17 OF 22 MEDLINE
TI DNA primase from KB cells. Evidence for a novel model of primase catalysis by a highly purified primase/polymerase-alpha complex.

L4 ANSWER 18 OF 22 MEDLINE
TI Injection of DNA into liposomes by bacteriophage lambda.

L4 ANSWER 19 OF 22 MEDLINE
TI Morphological analyses of active genes and chromatin.

L4 ANSWER 20 OF 22 MEDLINE
TI Chromosomal replication of Drosophila virilis. II. Organization of active origins in diploid brain cells.

L4 ANSWER 21 OF 22 MEDLINE
TI Temporal analysis of the nuclear cycle by serial section electron microscopy of the fungus, Saprolegnia ferax.

L4 ANSWER 22 OF 22 MEDLINE
TI Characterization of the replicative structures of the DNA of a herpesvirus (pseudorabies).

=> d 11, 12 bib ab

L4 ANSWER 11 OF 22 CAPLUS COPYRIGHT 2000 ACS
AN 1998:180793 CAPLUS
DN 128:252336
TI Apparatus for the chemical synthesis of molecular arrays

IN Gamble, Ronald C.; Theriault, Thomas P.; Baldeschwieler, John D.
PA Incyte Pharmaceuticals, Inc., USA; Gamble, Ronald C.; Theriault, Thomas P.; Baldeschwieler, John D.
SO PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9810858	A1	19980319	WO 1997-US16594	19970916
W: AT, AU, BR, CH, CN, DE, DK, ES, FI, GB, IL, JP, KR, MX, NO, NZ, RU, SE, SG, US, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5981733	A	19991109	US 1996-714867	19960916
AU 9745839	A1	19980402	AU 1997-45839	19970916
EP 946282	A1	19991006	EP 1997-944316	19970916
R: BE, DE, ES, FR, GB, IT, NL				

PRAI US 1996-714867 19960916
WO 1997-US16594 19970916

AB An app. for the automated synthesis of mol. **arrays**. A jetting device is employed along with a reaction chamber to dispense reagents used in the synthesis onto the substrate. A positioning system moves the substrate from the jet to the reaction chamber. A controller controls the movement of the substrate and the application of the reagents so that the synthesis is carried out according to a pre-detd. procedure. The app. will synthesize **oligodeoxyribonucleotide** in an **array** of **micron**-size spots according to a pattern selected by the operator immediately prior to synthesis.

L4 ANSWER 12 OF 22 CAPLUS COPYRIGHT 2000 ACS
AN 1997:776110 CAPLUS
DN 128:32105
TI Jet droplet device and method
IN Gamble, Ronald C.; Theriault, Thomas P.; Baldeschwieler, John
PA Incyte Pharmaceuticals, Inc., USA; Gamble, Ronald C.; Theriault, Thomas P.; Baldeschwieler, John
SO PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9744134	A1	19971127	WO 1997-US8135	19970513
W: AT, AU, BR, CN, DE, DK, ES, FI, GB, IL, JP, KR, MX, NO, NZ, RU, SE, SG, US, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9731250	A1	19971209	AU 1997-31250	19970513
EP 898495	A1	19990303	EP 1997-926493	19970513
R: BE, DE, ES, FR, GB, IT, NL				
JP 2000513266	T2	20001010	JP 1997-542504	19970513
US 6001309	A	19991214	US 1998-79871	19980515

PRAI US 1996-649535 19960517
WO 1997-US8135 19970513

AB Devices and method are provided for precise redn. of **arrays** of microspots. A pulse jetting device is employed having a capillary of **micron** dimensions, with a portion of the capillary proximal to the jetting orifice circumferentially surrounded by a piezoelec. transducer. By appropriate design of the capillary, orifice and piezoelec. transducer,

droplets can be formed on a surface, sepd. by as little as 80 .mu. center-to-center, and having at least about a 15 .mu. spacing at the border. The subject substrate **arrays** can be used for providing miniaturized **arrays** of reagents, such as **nucleic** acids, for detecting the presence of homologous sequences in a sample.

=> d 3, 6-8 bib ab

L4 ANSWER 3 OF 22 CAPLUS COPYRIGHT 2000 ACS
AN 2000:797746 CAPLUS
TI Arrays produced by DNA nanotechnology.
AU Seeman, Nadrian C.
CS Department of Chemistry, New York University, New York, NY, 10003, USA
SO Abstr. Pap. - Am. Chem. Soc. (2000), 220th, PHYS-571
CODEN: ACSRAL; ISSN: 0065-7727
PB American Chemical Society
DT Journal; Meeting Abstract
LA English
AB Nanotechnol. is the science of well-structured materials and their components. **DNA** nanotechnol. employs branched motifs and sticky ends to achieve these aims. A central goal of **DNA** nanotechnol. is the self-assembly of periodic matter. We have constructed **micron**-sized 2-dimensional **DNA arrays** in three different motifs. In the first motif, we have used double crossover mols. decorated with **DNA** hairpins that protrude from the plane of the 2-D **array** and are visible in the AFM. We can change the pattern by changing the components, and by modification after assembly. We have used triple crossover mols. whose rotation leads to different patterns in the AFM. We have generated **arrays** from parallelograms predicated on Holliday junction analogs that contain cavities whose sizes can be tuned. We can program aperiodic assemblies to represent the results of logical operations. We have performed two cumulative XOR operations, with high fidelity.

L4 ANSWER 6 OF 22 CAPLUS COPYRIGHT 2000 ACS
AN 2000:795362 CAPLUS
TI DNA nanostructure arrays.
AU Seeman, Nadrian C.
CS Department of Chemistry, New York University, New York, NY, 10003, USA
SO Abstr. Pap. - Am. Chem. Soc. (2000), 220th, IEC-113
CODEN: ACSRAL; ISSN: 0065-7727
PB American Chemical Society
DT Journal; Meeting Abstract
LA English
AB Nanotechnol. produces well-structured materials and their components. **DNA** nanotechnol. employs branched motifs and sticky ends to achieve these aims. A central goal of **DNA** nanotechnol. is the self-assembly of periodic matter. We have constructed **micron**-sized 2-dimensional **DNA arrays** in three different motifs. In one motif, we have used double crossover mols. decorated with **DNA** hairpins that protrude from the plane of the 2-D **array** and are visible in the AFM. We can change the pattern by changing the components, and by restriction, ligation or annealing after assembly. The rotation of triple crossover mols. leads to further patterns in the AFM. We have generated **arrays** from parallelograms predicated on Holliday junction analogs that contain tunably sized cavities. We also can program aperiodic assemblies to represent the results of logical operations. We have performed two cumulative XOR operations, with high fidelity.

L4 ANSWER 7 OF 22 CAPLUS COPYRIGHT 2000 ACS
AN 2000:326889 CAPLUS

TI Simplified fabricatio[redacted]f integrated CE on chips.
AU Zhao, Dong S.; McCorm[redacted], Matthew T.; Kuhr, Werner G.
CS Department of Chemistry, UC, Riverside, CA, 92521, USA
SO Book of Abstracts, 219th ACS National Meeting, San Francisco, CA, March 26-30, 2000 (2000), ANYL-096 Publisher: American Chemical Society, Washington, D. C.
CODEN: 69CLAC
DT Conference; Meeting Abstract
LA English
AB One of the major barriers that exists for the implementation of on-**chip** devices is the difficulty of creating the **micron**-sized structures in glass or fused silica, which are currently prepd. with expensive, specialized nanolithog. and silicon-based etching processing. An alternative procedure involves the creation of **micron**-scale molds using simple machining on a wide variety of substrates with **micron** resoln., was previously described for manufg. integrated microfluidic elements1. These molds are then used to cast PDMS microfluidic systems for capillary electrophoresis. This process has been simplified and makes it possible to design, produce a mold, and to fabricate a microfluidic system in polydimethylsiloxane (PDMS) in less than 8 h. The performance of microfluidic systems prepd. in this way is evaluated by examg. the performance of a capillary electrophoresis sepn. of .PHI.X 174 **DNA**/Hae fragments with resoln. comparable to that obtained using a fused silica capillary.

Refs.

1. HPCE 99 Abstr. P492.

L4 ANSWER 8 OF 22 MEDLINE DUPLICATE 3
AN 1999284819 MEDLINE
DN 99284819
TI Discrimination of DNA hybridization using chemical force microscopy.
AU Mazzola L T; Frank C W; Fodor S P; Mosher C; Lartius R; Henderson E
CS Department of Chemistry, Stanford University, Stanford, California 94305, USA.
SO BIOPHYSICAL JOURNAL, (1999 Jun) 76 (6) 2922-33.
Journal code: A5S. ISSN: 0006-3495.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199909
EW 19990903
AB Atomic force microscopy (AFM) can be used to probe the mechanics of molecular recognition between surfaces. In the application known as "chemical force" microscopy (CFM), a chemically modified AFM tip probes a surface through chemical recognition. When modified with a biological ligand or receptor, the AFM tip can discriminate between its biological binding partner and other molecules on a heterogeneous substrate. The strength of the interaction between the modified tip and the substrate is governed by the molecular affinity. We have used CFM to probe the interactions between short segments of single-strand **DNA** (**oligonucleotides**). First, a latex microparticle was modified with the sequence 3'-CAGTTCTACGATGGCAAGTC and epoxied to a standard AFM cantilever. This **DNA**-modified probe was then used to scan substrates containing the complementary sequence 5'-GTCAAGATGCTACCGTTCAG. These substrates consisted of **micron**-scale, patterned **arrays** of one or more distinct **oligonucleotides**. A strong friction interaction was measured between the modified tip and both elements of surface-bound **DNA**. Complementary **oligonucleotides** exhibited a stronger friction than the noncomplementary sequences within the patterned **array**. The friction force correlated with the measured strength of adhesion (rupture force) for the tip- and **array**-bound **oligonucleotides**. This result is consistent with the formation of a greater number of hydrogen bonds for the complementary sequence, suggesting that the

friction arises from [redacted]equence-specific interaction [redacted]bridization) of

```
=> s (micron# or submicron# or micrometer# or nanometer#) and (array# or
chip# or biochip# or support#) and (DNA or RNA or nucleic or oligonucleotide#
or oligo# or probe# or protein# or polypeptide# or peptide#)

        113   FILE AEROSPACE
         24   FILE AGRICOLA
          2   FILE ALUMINIUM
          2   FILE ANABSTR
          1   FILE APILIT
          1   FILE APILIT2
          8   FILE APIPAT
          8   FILE APIPAT2
          7   FILE AQUASCI
  12 FILES SEARCHED...
          6   FILE BABS
          6   FILE BIOBUSINESS
          1   FILE BIOCOMMERCE
        110   FILE BIOSIS
         19   FILE BIOTECHABS
         19   FILE BIOTECHDS
         30   FILE BIOTECHNO
  20 FILES SEARCHED...
        872   FILE CANCERLIT
        222   FILE CAPLUS
  25 FILES SEARCHED...
         10   FILE CEABA-VTB
         80   FILE CEN
          6   FILE CIN
        103   FILE COMPENDEX
          7   FILE COMPUAB
          2   FILE COMPUSCIENCE
  35 FILES SEARCHED...
         18   FILE DKILIT
         35   FILE DGENE
  43 FILES SEARCHED...
          6   FILE ELCOM
          2   FILE EMA
          3   FILE EMBAL
         78   FILE EMBASE
  50 FILES SEARCHED...
         80   FILE ENERGY
          4   FILE ENTEC
         33   FILE ESBIOBASE
       4408   FILE EUROPATFULL
  54 FILES SEARCHED...
          3   FILE FROSTI
  59 FILES SEARCHED...
          3   FILE GEOREF
        356   FILE IFIPAT
  66 FILES SEARCHED...
        278   FILE INSPEC
         12   FILE INSPHYS
         81   FILE INVESTEXT
          1   FILE IPA
          2   FILE ISMEC
         47   FILE JICST-EPLUS
  73 FILES SEARCHED...
          1   FILE KOSMET
         24   FILE LIFESCI
```

```
      6012   FILE MEDLINE
         5   FILE METADEX
        17   FILE NIOSHTIC
 82 FILES SEARCHED...
       388   FILE NLDB
        64   FILE NTIS
         3   FILE OCEAN
         1   FILE PAPERCHEM2
 89 FILES SEARCHED...
        22   FILE PATOSEP
         8   FILE PATOSWO
         8   FILE PHIN
         3   FILE PIRA
         1   FILE POLLUAB
       778   FILE PROMT
 96 FILES SEARCHED...
         4   FILE RAPRA
       178   FILE SCISEARCH
         3   FILE SIGLE
         7   FILE SOLIDSTATE
         1   FILE TEXTILETECH
       645   FILE TOXLINE
106 FILES SEARCHED...
        16   FILE TOXLIT
         1   FILE TRIBO
         1   FILE TULSA
         1   FILE UFORDAT
         3   FILE ULIDAT
     19647   FILE USPATFULL
       344   FILE WPIDS
114 FILES SEARCHED...
       344   FILE WPINDEX

  72 FILES HAVE ONE OR MORE ANSWERS,  117 FILES SEARCHED IN STNINDEX

L1   QUE (MICRON# OR SUBMICRON# OR MICROMETER# OR NANOMETER#) AND (ARRAY# OR
CH
        IP# OR BIOCHIP# OR SUPPORT#) AND (DNA OR RNA OR NUCLEIC OR
OLIGONUCLEO
        TIDE# OR OLIGO# OR PROBE# OR PROTEIN# OR POLYPEPTIDE# OR PEPTIDE#)


=> d rank

F1       19647   USPATFULL
F2        6012   MEDLINE
F3        4408   EUROPATFULL
F4         872   CANCERLIT
F5         778   PROMT
F6         645   TOXLINE
F7         388   NLDB
F8         356   IFIPAT
F9         344   WPIDS
F10        344   WPINDEX
F11        278   INSPEC
F12        222   CAPLUS
F13        178   SCISEARCH
F14        113   AEROSPACE
F15        110   BIOSIS
F16        103   COMPENDEX
F17         81   INVESTEXT
F18         80   CEN
F19         80   ENERGY
F20         78   EMBASE
F21         64   NTIS
F22         47   JICST-EPLUS
```

```
F23          35   DGENE
F24          33   ESBIOBASE
F25          30   BIOTECHNO
F26          24   AGRICOLA
F27          24   LIFESCI
F28          22   PATOSEP
F29          19   BIOTECHABS
F30          19   BIOTECHDS
F31          18   DKILIT
F32          17   NIOSHTIC
F33          16   TOXLIT
F34          12   INSPHYS
F35          10   CEABA-VTB
F36           8   APIPAT
F37           8   APIPAT2
F38           8   PATOSWO
F39           8   PHIN
F40           7   AQUASCI
F41           7   COMPUAB
F42           7   SOLIDSTATE
F43           6   BABS
F44           6   BIOBUSINESS
F45           6   CIN
F46           6   ELCOM
F47           5   METADEX
F48           4   ENTEC
F49           4   RAPRA
F50           3   EMBAL
F51           3   FROSTI
F52           3   GEOREF
F53           3   OCEAN
F54           3   PIRA
F55           3   SIGLE
F56           3   ULIDAT
F57           2   ALUMINIUM
F58           2   ANABSTR
F59           2   COMPUSCIENCE
F60           2   EMA
F61           2   ISMEC
F62           1   APILIT
F63           1   APILIT2
F64           1   BIOCOMMERCE
F65           1   IPA
F66           1   KOSMET
F67           1   PAPERCHEM2
F68           1   POLLUAB
F69           1   TEXTILETECH
F70           1   TRIBO
F71           1   TULSA
F72           1   UFORDAT


=> file f4-40

COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
                                                 ENTRY     SESSION
FULL ESTIMATED COST                               6.30        6.45

FILE 'CANCERLIT' ENTERED AT 08:03:32 ON 28 DEC 2000

FILE 'PROMT' ENTERED AT 08:03:32 ON 28 DEC 2000
COPYRIGHT (C) 2000 Gale Group. All rights reserved.

FILE 'TOXLINE' ENTERED AT 08:03:32 ON 28 DEC 2000

FILE 'NLDB' ENTERED AT 08:03:32 ON 28 DEC 2000
```